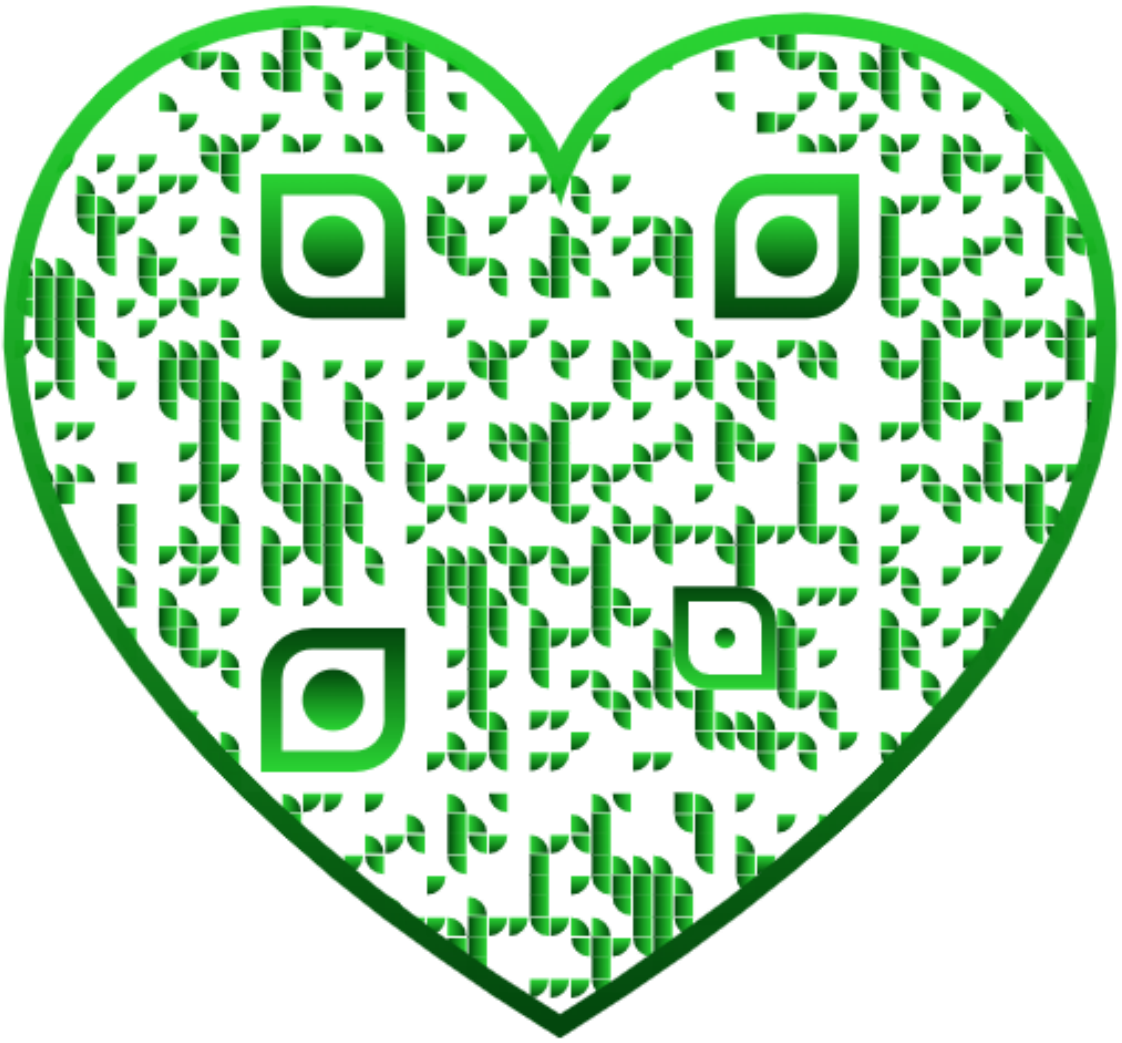
STUDIO SMARTS: HINTS FOR HIPPER TRACKS

Most discussions of recording technique center on equipment and cool ways to use it. At such times, it's easy to overlook a key point: Aesthetics play a huge role in creating a good mix. Decisions you make about your guitar parts-their register, timbre, and rhythmic density-affect the way they blend with other instruments and support the song. Your mix may be better served by fretboard savvy than by the latest piece of whiz-bang technology. ● Think of arranging as a fundamental recording technique. To stoke your creative fires, here are some time-tested ideas to try at your next session.

● **IN SEARCH OF SHIMMER.** You don't have to rely on a chorus device, with its predictable, automated modulation, to animate your tracks. You can generate loads of shimmering harmonic texture using only a capo and an acoustic guitar.

BY ANDY WIDDERS-ELLIS

Some call this technique "cross guitar." ● Record your basic rhythm track using open-string chords played at the first and second position. Lay back; keep the rhythms spare and hold each chord out. Make each strum crisp and decisive. While a chord is ringing, gently pull or push on the neck to create subtle pitch fluctuations. (Take it easy-no King Kong moves with your flat-top, okay?) Don't let this neck vibrato sound mechanical; feel out appropriate spots to finesse the movement into your part. ● Next, jot down a quick chord chart of what you played. While listening to your basic track, slap on a cape-try the third or fifth fret-and work out the progression using new chord forms. Again, go for as many open strings as possible. To aid the old brain in the translation process, pencil in the new chord names-the ones your fingers think they're playing-above the originals. Switch to a thin, flexible pick or play fingerstyle to lighten up the sound and provide timbral contrast. Make this track more rhythmic and delicate than its predecessor. Think lace. ● As you record this second part, listen for delightful,



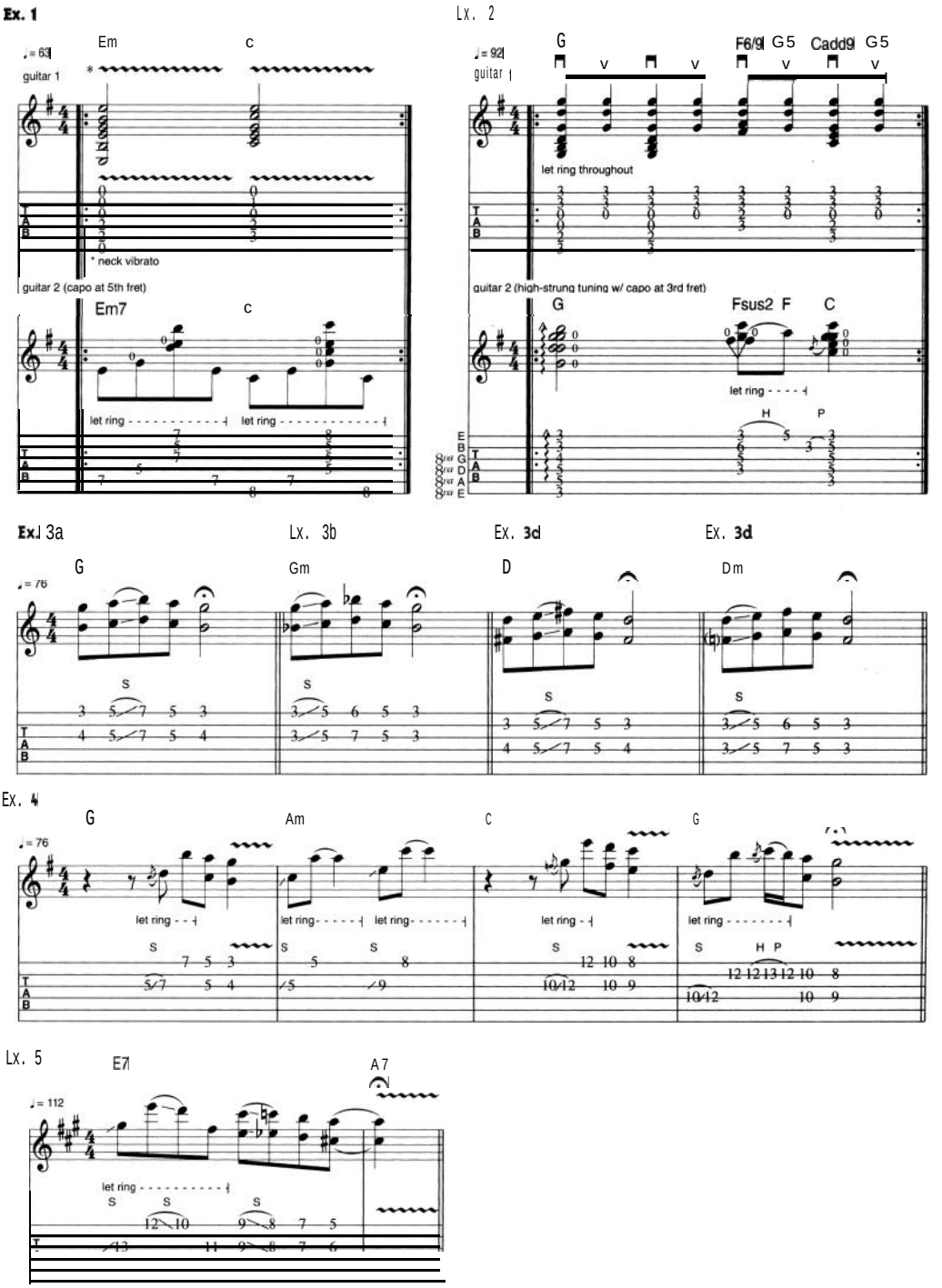
naturally occurring tuning deviations between the two tracks. The ringing open strings in both parts generate slightly detuned unisons and octaves **(Ex.** 1). To enhance the effect, again apply judicious neck vibrato. You can go hog-wild and repeat the process one more time, recapoing even higher and recording a third acoustic track. If you have a nylon-string guitar, try it. Just keep featuring those open strings for a mondo autoharp effect.

During remix, use these tracks to create a huge, shimmering tone-wood cathedral. Your tools? Pan position and track level. Try subtle changes in reverb between tracks too. Rule of thumb: The more active the part, the drier it should be mixed.

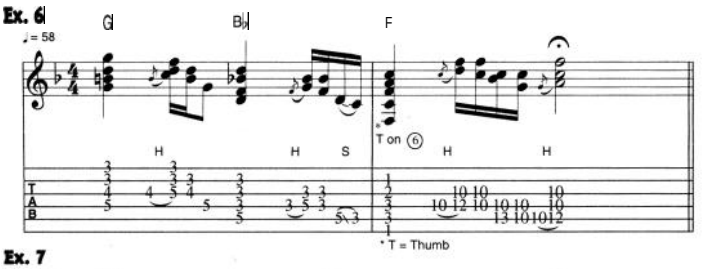
High-strung guitar-your jangle generator. For years, Nashville session cats have used a secret weapon for building their acoustic power tracks. Called the high-strung guitar (or sometimes, ah, angel hair), it's essentially 50% of a 12-string. To convert an ordinary B-string flat-top to high-strung specs, simply replace the low *E*, A, *D*, and G strings with the octave strings from a 12-string set (see FYI sidebar, page 78, for suggested gauges). The *B* and high *E* strings remain at normal pitch.

What you get is a twisted soprano guitar: Standard chord fingerings yield beautiful closed voicings you can't fret in regular tuning. Overdub a high-strung part against an open-string basic track, and you'll get natural chorusing that won't quit. No matter how carefully you tune, your octave and unisons will never match perfectly-that's the point. Add a capo to the brew (combining cross guitar and high-strung techniques) for utterly scintillating open-string jangle, as in **Ex. 2.** Songwriters: Nothing spices up a straightforward voice/guitar demo faster than a capoed high-strung guitar track.

Thicken up. You want *more* texture, you say? No problem-if you have a variable pitch control on your multitrack tape deck. Try this: Before you lay down your electric or acoustic rhythm guitar, *reduce* the recording speed ever so slightly. Cut your track; use some neck wiggle on the way. When you're satisfied with the performance, return the pitch knob to its center position. The track will play back a tad sharp. Now, *increase the* recording speed a hair and double your rhythm part as accurately as possible on a second track (again apply gentle neck whammy, but in different spots). Next, zero the pitch control. In contrast to the sharp original, the double will play back a little flat.



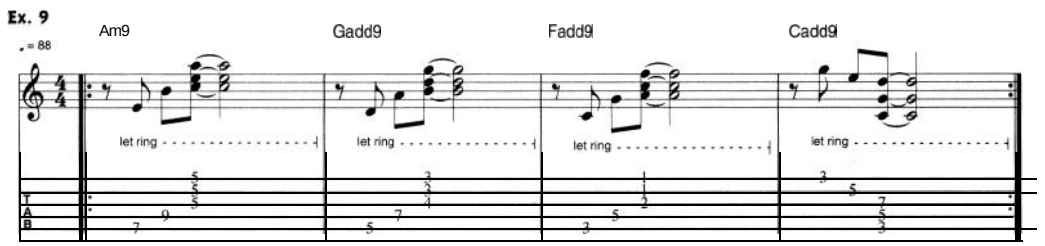
Ex. 6



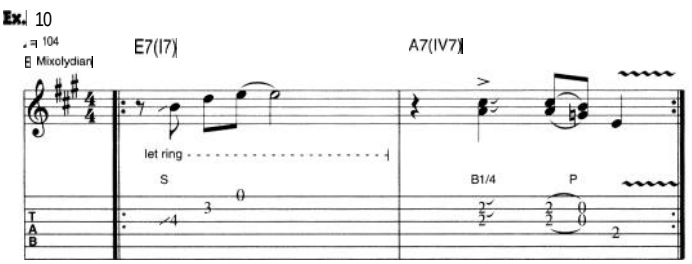
Ex. 7

Ex. 8

Ex. 9



Ex. 10



Pan the two tracks wide apart to create a silky, watery texture. With this technique, you control two types of pitch variation: The main, fixed detuning amount is determined by the disparity in recording speeds. Small, random pitch fluctuations result from stressing the neck and strings differently on each track.

If you want to get completely out of hand, use this vari-speed technique on your cross guitar and high-strung acoustic parts.

Thin out. Sometimes thick harmonic texture is exactly the wrong spice to add to a track. There may already be rhythm guitar, keyboards, or horns nailing down the progression. When the song calls for a tasty lead part that's less filling, turn to sixths. These intervals offer a wealth of possibilities for sketching harmony while providing some ear-tweaking melodic activity.

Ex. **3a** and **Ex.** 3b illustrate how to finger sixths on the first and third strings to outline major and minor chords. Identical shapes work on the second and fourth strings (Ex. **3c** and Ex. **3d**). There are three moves for each chord. You can hold the lowest and highest positions against the prevailing harmony; the middle position functions as a stepping stone.

These moves are ubiquitous in a wide variety of music. Just turn on the radio and scan the airwaves; within a few minutes you're bound to hear some sixths. For a master class on the subject, check out Otis Redding's "(Sittin' On) The Dock Of The Bay." Steve Cropper lays it down in the bridge section ("looks like nothin's gonna change. . ."). Hear how he drifts with the progression, implying the harmony without getting tangled up in the organ or horn parts.

Play Ex. 4 to get a feel for how sixths can suggest chords while leaving lots of open space. In this context, sixths have a sweet, soulful sound-good for country, R&B, and ballads. But sixths can be tart too: Ex. 5 shows 'em in a classic V7-I7 blues cadence.

Melodic rhythm. Some songs demand chonkin' power chords or relentless strumming. On the other hand, the best way to add magic to a track is often with flowing, melodic rhythm parts. This subtle electric style has its roots in gospel and R&B. Curtis Mayfield pioneered this sound: Hendrix took it to breathtaking heights in "Wind Cries Mary," "Castles Made Of Sand," "Little Wing," and 'Angel."

There are three important ma-

neuvers to emphasize in a melodic rhythm part: You want to shift between a chord's fifth and sixth, third and fourth, and second and third degrees. Ex. 6 demonstrates these moves in several positions.

Ex. 7 is a more complete workout that takes you from the 12th to the 1st position. When constructing a melodic rhythm part, the trick is to time your activity to fall between vocal phrases. You may have only a few beats in which to cast your spell (bars 1-4), or you may have the luxury of a couple of measures (bars 6 and 7).

Learning to play great melodic rhythm is a lifelong affair. Amazingly, it remains a relatively obscure discipline in a world full of scale-oriented fretboard gymnasts.

Sixths, with their thumbnail harmony and inherent motion, work beautifully with the tension and release of melodically embellished chords. Try Ex. 8 to get a feel for integrating the two.

Dodging downbeats. Some of the best advice I ever received came from a grizzled Nashville studio engineer. "You're fightin' traffic, son," he muttered during an overdub session. "The kick drum, bass, keyboard, your guitar-everything's coming in on 'one.' Give yourself a break. Don't work so hard; ease in *after* the downbeat."

Ex. 9 illustrates this approach; notice how each chord occurs on *the and* of one. This leaves plenty of time for the bass and drums to do their dirty deeds. Use this simple but incredibly effective technique to impart space and clarity to your mixes. The approach works not only with artsy-fartsy purple chords, as in the previous example, but with gritty, Stonesy riffs as well (Ex. 10). Moral: Let the guys with the fat strings, big sticks, and taut skins duke it out amongst themselves; you can waltz in and pick daisies after the fracas.

Beads on a string. When you really want to thin things out, particularly in a song laden with synth and horn parts, dispense with chords and intervals altogether. Eyeball the harmony and seek out a stepwise line consisting of one note per chord. For instance, the descending chromatic line in Ex. 11a is but one of several possibilities available in a *B-F#7-A-E7* progression. Once you've hacked a basic trail through the chords, add rhythm and melodically embellish the stepwise movement, as in Ex. 11b. A well-crafted line can imply chords while adding serious groove. On ballads, pretend you're playing a viola part; on up-tempo numbers be a funky sax or clavinet.

Tritone cool. The essence of a dominant 7th chord lies in its tritone interval (see FYI). Unlike a full chord, which can prove unwieldy when you're trying to

move it around quickly in funk and R&B grooves, a tritone is trim and mobile. Ex. **12a** shows a I7-IV7-V7-I7 progression reduced to tritones. Dig the economy of motion: It's exclusively stepwise. Also, notice how each note's role reverses as you change chords. In *A7*, the top note is the 3rd, the bottom note is the ♭7th. For *D7* (and, natch, *E7*, a whole-step up), things flip-flop: the top note is the ♭7th, the bottom is the 3rd. Lordy, where's the Dramamine?

Tritones make dynamite building blocks for riffs. Ex. **12b**, **12c** and **12d** illustrate one of many ways to construct a snappy tritone part. Try organizing these *A7*, *D7*, and *E7* modules into various funked-out progressions.

Divide and conquer. In the studio, you can disassemble riffs that you'd play as one part onstage and record each component separately. There are some cool bennies: You can alternate guitars on each part, EQ the elements differently, pan the tracks, add weird effects, and play games with the levels (mix part A louder on verse 1, bring out part B on verse 2, etc.). Also, a tough figure, such as Ex. 13, becomes *sooo* much easier to pull off when you only have to nail 50% of it in a pass.

Next time you come up with a killer riff, ask yourself if there's any logical way to rend it asunder and reassemble it on tape. Hey, it's call and response.

Syncro-sonic trippin'. This one's fun. You can use a digital delay line (DDL) to make yourself sound much badder than life by generating echoes that are timed to the music. Using the simple syncro-sonic formula (see FYI again), you can calculate the value in milliseconds for a quarter note at any tempo. Once you have this wired, halve the value to produce an eighth-note slap (be sure to set the feedback or regeneration to zero for only one repeat). Now you can play classic rockabilly riffs using only quarter-note downbeats; the echoes provide the eighth-note upbeat.

But way cooler is the beat-and-a-half DDL trick. By extending a quarter-note's ms value by 50%, you create a little monster that shows its fangs every dotted quarter or three eighth-notes. This means when you play a figure in 4/4 that stops on beat three (such as Ex. **14a**), the DDL obediently harmonizes some of your notes and then completes the measure on its own. Check it out-it's a gas. Ex. 14b gets you started with a kind of Euro-techno figure. The notes in parentheses are digitally generated.

Some final tips. Here are a few more suggestions to help you groove better, longer, and louder:

- When you're close to getting a handle on the new part, roll the tape. The goal is to capture an idea while it's fresh-preferably as it comes together-rather than after it becomes old hat.
- If, after a few passes, you sense a technique isn't working, don't force it; try something else. There's always another song, another session. Parts that come together spontaneously generally result in better mixes.
- If possible, change guitars and amps for every overdub in a given song. You'll generate more tonal variety and keep from clogging up a particular frequency. (Recapoing an acoustic usually has the effect of shifting its voice to a slightly different register.)
- Single-coils and humbuckers occupy different sonic turf. Enhance part definition by contrasting the two sounds.
- Don't postpone your tone. Try to capture the guitar sound you have in mind-effects and all-on tape from the get-go. However, be judicious with reverb; it's best applied during mix-down.
- Less is more: The less EQ, the sweeter the tone. The fewer effects, the cleaner the mix. The fewer devices in your signal path, the punchier the sound. The quicker you track, the fresher the vibe.
- Fighting musical murk: If a rhythm part isn't sitting well against the track-the harmony sounds cluttered or indistinct—rework your voicings using the next higher inversions. Move the lowest tone in each chord up an octave; this lifts your part one rung higher on the harmonic ladder. (To drop down a rung, move the highest notes down an octave.)
- When you're playing on someone else's song, always ask to hear the vocal melody and lyrics. Knowing where the vocal falls is essential for avoiding musical trainwrecks. You want to add fills around the melody, not compete with it. Lyrics determine a song's emotional tone; this, in turn, affects your choice of sound and direction.
- Finally, instead of laboring over one song in a futile attempt to make it *perfect*, make your goal to record and mix as many tunes as possible. Experience is what hones your instincts for cutting killer tracks.

FYI: HIGH-STRUNG GUITAR & OTHER DELIGHTS

NASHVILLE HIGH. It's pretty easy to convert a flat-top to a high-strung guitar. In effect, you're replacing the bottom four strings with their octaves from a 12-string set, while leaving the top two strings alone. Give these gauges a try: low *E* = .024 wound, *A* = .016 (plain), *D* = .012, *G* = .009, *B* = .014, and high *E* = .011.

For a reality check, here's how the retuned strings compare to standard tuning: High-strung low *E* = normal 4th string, 2nd fret; *A* = normal 3rd string, 2nd fret; *D* = normal 2nd string, 3rd fret; and *G* = normal 1st string, 3rd fret.

TRITONE THEORY. A tritone is an interval whose notes are three whole-steps apart. The tritone (a diminished fifth) divides an octave in half; when inverted, it remains a tritone. Wild, huh? In a dominant 7th chord, the 3rd and ♭7th degrees form a tritone—*E* and *B*♭ in *C7*, for example.

SYNCRO-SONIC ECHO. You can calculate a quarter-note's duration in milliseconds with this simple formula: 60,000 ÷ tempo. For example, if your tempo is ♩ = 160, you'll get a quarter-note echo with a setting of 375ms (60,000 ÷ 160 = 375). For an eighth-note echo, divide by two. Eighth-note triplets? Divide the quarter-note value by three.

In Ex. 14, we added 50% of the quarter-note's value to produce a dotted-quarter echo. The tempo is ♩ = 150. The quarter value is therefore 400ms (60,000 ÷ 150 = 400), and the dotted-quarter value is 600ms. Remember, unless you want a Swiss-Alps effect, set the feedback to zero for only one repeat.

—AW-E